

FEDERAL UTILITY PARTNERSHIP WORKING GROUP SEMINAR

May 18-19, 2016
Cincinnati, OH

FPL

Best Practices for ECM Selection

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May 18, 2016

Hosted by:





Federal Utility Partnership Working Group
May 18-19, 2016 Cincinnati, OH



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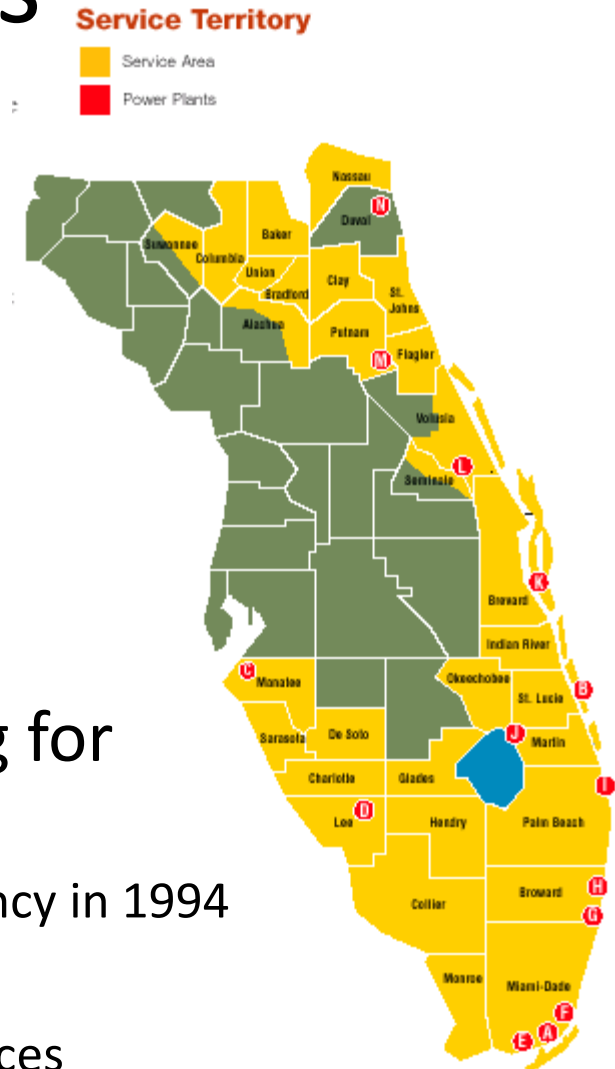




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FPL Fun Facts

- Part of the NextEra Energy family
 - NextEra Energy Resources
 - NextEra Energy Solutions
 - GEXA
 - FPL (Utility)
- 3rd largest investor-owned utility
 - Lowest Electric Rates in the State
- Providing Performance Contracting for over 25 years
 - Executed the first BOA for energy efficiency in 1994
 - Completed 60 individual UESC projects
 - Worked with 10 different Agencies/Services



Best Practices for ECM Selection

Utility Energy Services Contract

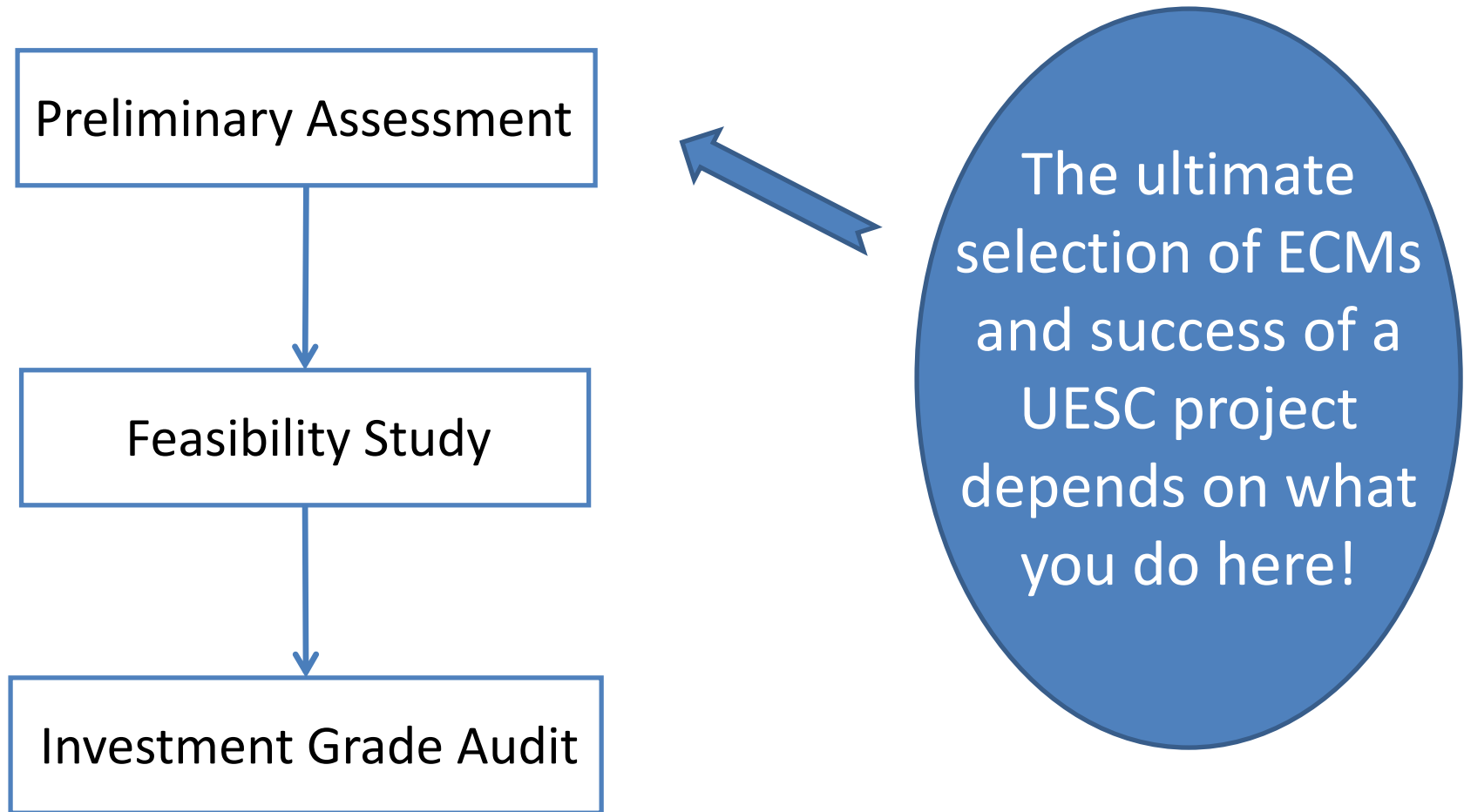
Limited Source Contract with the serving utility based on demonstrating the performance of the installed equipment and systems.

Can be included under the Presidential Performance Contracting Challenge (PPCC).



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Typical UESC Development Process

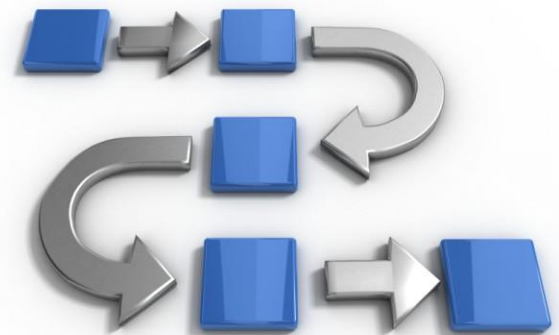


Qualities of a Successful UESC

- Meets all legal and program requirements
 - ECMs save energy/water/cost
 - Dollar savings exceed finance payments
 - Appropriate level of Performance Assurance
- Comprehensive in ECMs
- Solves facility O&M Issues
- **IS SELLABLE!!!!**
- **PERFORMS!!!!**

Before You Start

- Understand roles and responsibilities of the “Team” Secure team commitment
- Locate decision makers. Get them on board
- Agree on a reasonable timeline
- Continuous, clear, recorded communication
- Understand processes and expectations



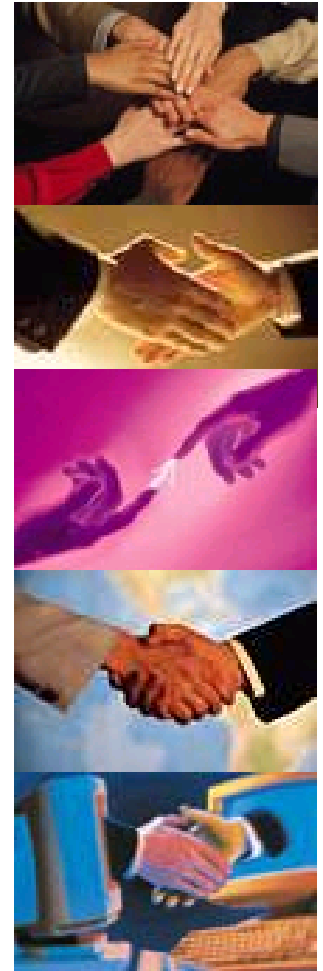
Example of Process Expectations

60% Design Report:

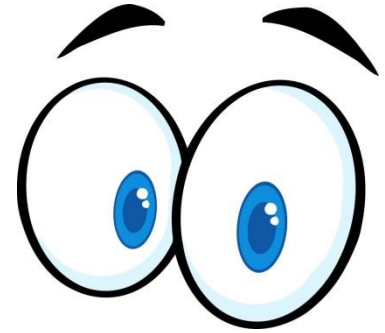
- Report content and organization based on ESPC Contract Section H.5
 - Output to include revised ECM list with revised cost and savings based on the review of the 30% and additional investigation, analysis and data collection
 - Finalized Scope of Work for each ECM
 - Proposed construction schedule
 - M&V plan
 - Finalized data gathering from metering and loggers.
 - Finalized bid and design documents
 - Finalized baselines
- Pricing based on finalized scope by FPL estimator and discussions with vendors/potential subs
- Savings based on revised ECM scope, finalized data/metering information, and engineering calculations/assumptions.

Preliminary Assessment

- Provide a **comprehensive** menu of potential ECMs with preliminary savings analysis and pricing.
- Allows the Customer to pick and choose the appropriate ECMs to further develop in later project stages.

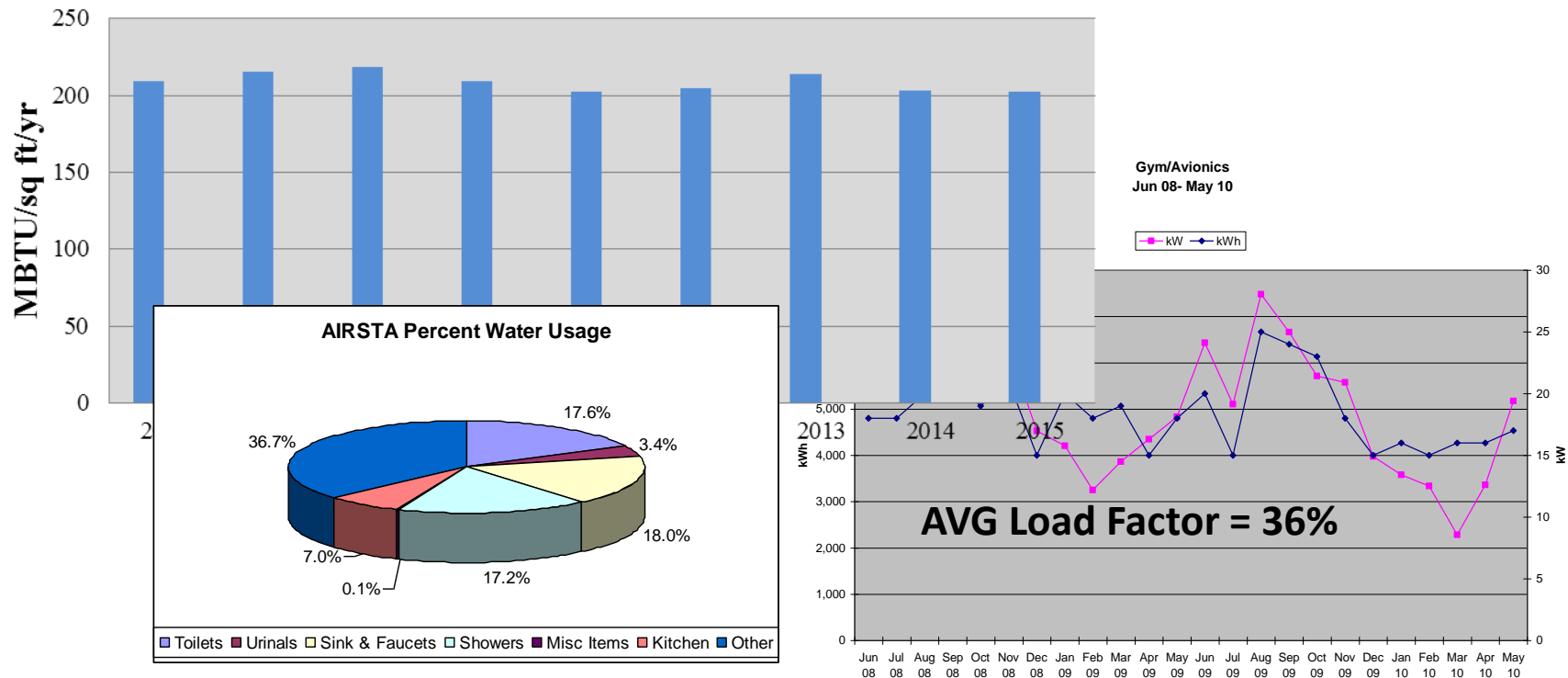


Where to Start?



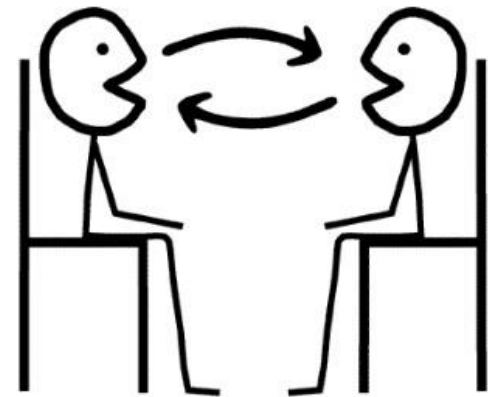
- Understand current usage patterns

Miami VAMC - EUI (MBTU/sq ft/yr)




Where to Start?

- Facility's 5 year capital improvement plan
- Recent energy audits and RCx reports
- **TALK TO EVERYONE!**
 - Facility Engineers
 - Maintenance Personnel
 - Food Service
 - Housekeeping
 - Occupants/Users/Stakeholders
 - Management



Keys to PA Development

- Comprehensive and complete
 - Solves on-going O&M problems
 - Takes advantage of bundling
 - Includes leading edge technologies
 - **Include solutions for as many people, functions, departments....as possible.**
- 

Keys to PA Development

Its not just about energy/water savings!

- Its about the Mission
- Its about the Pain
 - »Maintenance
 - »Operations
 - »Housekeeping
 - »Staffing
 - »Budgets



Make Your Project Comprehensive

ECM Technical Categories

Technical Category	Description
TC-1	Boiler Plant Improvements
TC-2	Chiller Plant Improvements
TC-3	Building Automation Systems
TC-4	Heating, Ventilation, and Air Conditioning
TC-5	Lighting Improvements
TC-6	Building Envelope
TC-7	Chiller Water, Hot Water and Steam Distribution Systems
TC-8	Electric Motors and Drives
TC-9	Refrigeration
TC-10	Distributed Generation
TC-11	Renewable Energy Systems
TC-12	Energy/Utility Distribution Systems
TC-13	Water and Sewer Conservation
TC-14	Electrical Peak Shaving/Load Shifting
TC-15	Cost Reduction Through Rate Adjustment
TC-16	Energy Related Process Improvements
TC-17	Commissioning
TC-18	Advanced Metering Systems
TC-19	Appliance/Plug Load Reductions
TC-20	Future

Preliminary Assessment Pieces/Parts

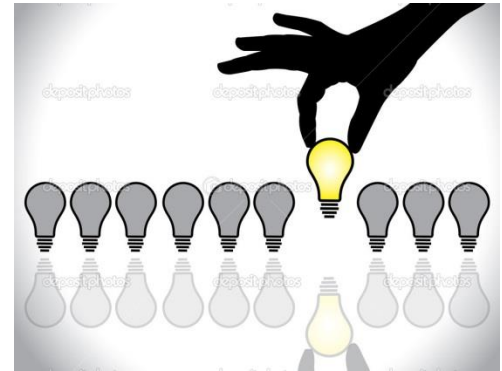
- Complete, well organized document
- Provide honest defensible costs and savings
 - Properly competed subcontractors
 - ESCO Costs (Development, PM, CM...) within range/average
 - Rates (off-on peak \$/kWh) (kWh vs. kWd)
- **Focused on the benefits to the customer rather than the savings.**

Post Preliminary Assessment

- Negotiate concise list of Valued ECMs
 - Discussions with multiple stakeholders
 - Buy-in from upper management
- Negotiate appropriate level of Post Acceptance Activities
 - Commissioning/Training
 - Performance Assurance
 - O&M (self performed or annual service plans)

ECM Selection

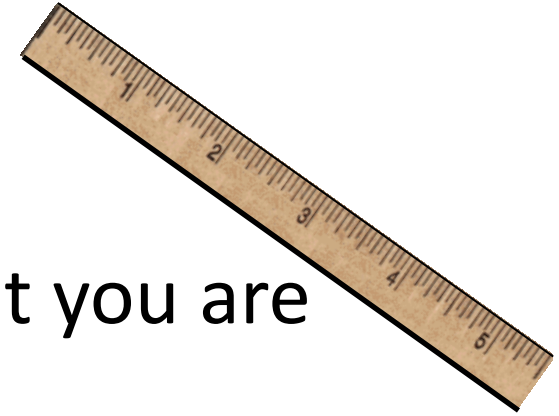
- Customer/site driven (Agency supported)
 - Solve O&M problems
 - Solve mission related issues
 - Relieve budgetary constraints
 - Consider Annual Service Contracts
 - Long life equipment
 - Mass replacements
- Reduces energy/water costs



ECM Selection (tips)

- Take full advantage of smart metering and building automation systems
 - Include automated “continuous monitoring”
 - Event/failure notification
 - Preventative maintenance
 - Performance Assurance
- } Sustainable Energy Savings
- Bundle bundle bundle.

Key Highlights



- Understand with whom and what you are doing before you do it.
- Look for solutions to facility O&M problems
- Spread the benefits
 - Cultivate and expand project advocates
 - Foster their assistance in the solution
- Stress the benefits to the user/mission rather than the savings